

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1(Currently amended). A method of screening for schizophrenia in a population or of diagnosing schizophrenia in a host, comprising determining the magnitude of expression, in members of the population or in the host, of at least one gene selected from the group consisting of Small inducible cytokineA2, Growth arrest and DNA-damage-inducible beta, S100 calcium binding protein A8, Cyclin-dependent kinase inhibitor 1A p21/Cip1, Interleukin 1receptor-like 1, Transglutaminase, V-maf musculo aponeurotic fibrosarcoma oncogene homolog F, Serine or cysteine proteinase inhibitor clade A member 3, GRO1 oncogene melanoma growth stimulating activity alpha, CD14 antigen, Tensin 2, Chitinase 3-like 1, cartilage glycoprotein-39, Serine or cysteine proteinase inhibitor clade H, Metallothionein 1X, KIAA0620 protein, Tissue inhibitor of metalloproteinase 1, Nuclear mitotic apparatus protein 1, DNA-damage-inducibletranscript 3, and Transducer of ERBB2 ~~those disclosed in Table 1~~ in a sample and comparing the magnitude of expression to a baseline magnitude of expression of the gene, wherein increased gene expression indicates the presence of schizophrenia.

2(Currently amended). A method of screening for schizophrenia in a population or of diagnosing schizophrenia in a host according to claim 1, wherein the sample is taken from brain, spinal cord, lymphatic fluid, blood, urine or feces.

Appln. No.
Amd. dated
Reply to Office Action of

3(Currently amended). A method of screening for schizophrenia in a population or of diagnosing schizophrenia in a host according to claim 2, wherein the sample is taken from the anterior cingulate.

4(Currently amended). A method of screening for schizophrenia in a population or of diagnosing schizophrenia in a host according to claim 1, wherein the population is human.

Claims 5-8 (Cancelled).

9(Currently amended). A method for treating schizophrenia in a host, comprising lowering expression of at least one gene selected from the group consisting of ~~those disclosed in Table 1~~ Small inducible cytokine A2, Growth arrest and DNA-damage-inducible beta, S100 calcium binding protein A8, Cyclin-dependent kinase inhibitor 1A p21/Cip1, Interleukin 1 receptor-like 1, Transglutaminase, V-maf musculo aponeurotic fibrosarcoma oncogene homolog F, Serine or cysteine proteinase inhibitor clade A member 3, GR01 oncogene melanoma growth stimulating activity alpha, CD14 antigen, Tensin 2, Chitinase 3-like 1, cartilage glycoprotein-39, Serine or cysteine proteinase inhibitor clade H, Metallothionein 1X, KIAA0620 protein, Tissue inhibitor of metalloproteinase 1, Nuclear mitotic apparatus protein 1, DNA-damage-inducible transcript 3, and Transducer of ERBB2 by administering to the host:

(a) an expression lowering amount of antisense oligonucleotide;

(b) an expression lowering amount of a ribozyme which cleaves RNA associated with expression of the gene;

(c) one or more nucleic acid molecules designed to promote triple helix formation with said at least one gene or;

Appln. No.
Amd. dated
Reply to Office Action of

(d) one or more RNAi molecules designed to inhibit expression of said gene.

10(Currently amended). A method for treating schizophrenia in a host according to claim 9, wherein the host is human.

Claims 11-16 (Cancelled).

17(Currently amended). A method for treating schizophrenia in a host according to claim [[15]] 31, wherein the antibody or functional antibody fragment is selected from the group consisting of whole antibody, humanized antibody, chimeric antibody, Fab fragment, Fab' fragment, F(ab')₂ fragment, single chain Fv fragment and diabody.

18(Currently amended). A transgenic nonhuman animal comprising stably integrated in its genome either a gene selected from the group consisting of Small inducible cytokineA2, Growth arrest and DNA-damage-inducible beta, S100 calcium binding protein A8, Cyclin-dependent kinase inhibitor 1A p21/Cip1, Interleukin 1receptor-like 1, Transglutaminase, V-maf musculo aponeurotic fibrosarcoma oncogene homolog F, Serine or cysteine proteinase inhibitor clade A member 3, GRO1 oncogene melanoma growth stimulating activity alpha, CD14 antigen, Tensin 2, Chitinase 3-like 1, cartilage glycoprotein-39, Serine or cysteine proteinase inhibitor clade H, Metallothionein 1X, KIAA0620 protein, Tissue inhibitor of metalloproteinase 1, Nuclear mitotic apparatus protein 1, DNA-damage-inducibletranscript 3, and Transducer of ERBB2, wherein expression of the gene is enhanced by one or more alterations in regulatory sequences of the gene such that the gene is expressed at higher than baseline levels and the animal exhibits schizophrenic behavior or an increased

Appln. No.
Amd. dated
Reply to Office Action of

copy number of said gene, ~~a gene selected from the group consisting of the genes disclosed in Table 1~~ wherein said gene is expressed at higher than baseline levels and the animal exhibits schizophrenic behavior.

19(Currently amended). A transgenic nonhuman animal according to claim 18, wherein the transgenic nonhuman animal is a mammal.

Claims 20 and 21 (Cancelled).

22(Currently amended). A transgenic nonhuman animal according to claim [[20]] 18, in which the expression of the gene is enhanced by one or more alterations in regulatory sequences of the gene, wherein the one or more alterations comprises substitution of a promoter having a higher rate of expression than the native promoter of the gene.

23(Currently amended). A transgenic nonhuman animal according to claim 22, wherein the promoter is an inducible promoter.

24(Currently amended). A transgenic nonhuman knockout animal whose genome comprises a homozygous disruption in one or more genes selected from the group consisting of ~~these disclosed in Table 1~~ Small inducible cytokine A2, Growth arrest and DNA-damage-inducible beta, S100 calcium binding protein A8, Cyclin-dependent kinase inhibitor 1A p21/Cip1, Interleukin 1 receptor-like 1, Transglutaminase, V-maf musculo aponeurotic fibrosarcoma oncogene homolog F, Serine or cysteine proteinase inhibitor clade A member 3, GRO1 oncogene melanoma growth stimulating activity alpha, CD14 antigen, Tensin 2, Chitinase 3-like 1, cartilage

Appln. No.
Amd. dated
Reply to Office Action of

glycoprotein-39, Serine or cysteine proteinase inhibitor clade H, Metallothionein 1X, KIAA0620 protein, Tissue inhibitor of metalloproteinase 1, Nuclear mitotic apparatus protein 1, DNA-damage-inducible transcript 3, and Transducer of ERBB2, wherein said homozygous disruption prevents the expression of the gene, and wherein said homozygous disruption results in the transgenic knockout animal exhibiting decreased expression levels of the one or more genes as compared to a wild-type animal.

25(Original). A method of screening for a therapeutic agent that modulates symptoms of schizophrenia comprising administering a candidate compound to a transgenic nonhuman animal according to claim 18 and determining the effect of the compound on symptoms associated with schizophrenia.

Claim 26(Cancelled).

27(Original). A method of screening for a therapeutic agent that modulates symptoms of schizophrenia comprising combining a candidate compound with a transgenic nonhuman animal according to claim 24 and determining the effect of the compound on symptoms associated with schizophrenia.

28(Currently amended). A method of screening for a compound useful in the treatment of schizophrenia comprising operatively linking a reporter gene which expresses a detectable protein to a regulatory sequence for a gene selected from the group consisting of ~~those disclosed in Table 1~~ Small inducible cytokine A2, Growth arrest and DNA-damage-inducible beta, S100 calcium binding protein A8, Cyclin-dependent kinase inhibitor 1A p21/Cip1, Interleukin 1receptor-like 1, Transglutaminase, V-maf musculo aponeurotic fibrosarcoma oncogene homolog F, Serine or cysteine

Appln. No.
Amd. dated
Reply to Office Action of

proteinase inhibitor clade A member 3, GRO1 oncogene melanoma growth stimulating activity alpha, CD14 antigen, Tensin 2, Chitinase 3-like 1, cartilage glycoprotein-39, Serine or cysteine proteinase inhibitor clade H, Metallothionein 1X, KIAA0620 protein, Tissue inhibitor of metalloproteinase 1, Nuclear mitotic apparatus protein 1, DNA-damage-inducible transcript 3, and Transducer of ERBB2 to produce a reporter construct; transfecting a cell with the reporter construct; exposing the transfected cell to a test compound; and comparing the level of expression of the reporter gene after exposure to the test compound to the level of expression before exposure to the test compound, wherein a lower level of expression after exposure is indicative of a compound useful for the treatment of schizophrenia.

Claims 29 and 30 (Cancelled).

31 (New). A method for treating schizophrenia in a host, comprising reducing the amount of at least one protein encoded by the genes selected from the group consisting of Small inducible cytokine A2, Growth arrest and DNA-damage-inducible beta, S100 calcium binding protein A8, Cyclin-dependent kinase inhibitor 1A p21/Cip1, Interleukin 1 receptor-like 1, Transglutaminase, V-maf musculo aponeurotic fibrosarcoma oncogene homolog F, Serine or cysteine proteinase inhibitor clade A member 3, GRO1 oncogene melanoma growth stimulating activity alpha, CD14 antigen, Tensin 2, Chitinase 3-like 1, cartilage glycoprotein-39, Serine or cysteine proteinase inhibitor clade H, Metallothionein 1X, KIAA0620 protein, Tissue inhibitor of metalloproteinase 1,

Appln. No.
Amd. dated
Reply to Office Action of

Nuclear mitotic apparatus protein 1, DNA-damage-inducible transcript 3, and Transducer of ERBB2 in a patient by administering an effective amount of antibody or functional antibody fragment sufficient to interfere with the normal activity of the protein.

32(New). A method for treating schizophrenia in a host according to claim 31, wherein the host is human.